



SERIES 880FA-12-80PBRC72
FULLY-AUTOMATIC WINDER STRETCH
WRAP SYSTEM WITH CONVEYORS



OPERATORS
MANUAL

Table of

Contents

Warranty.....	3
Assembly.....	4
Loading Film.....	4-5
Controls.....	5
Operating Instructions.....	6
Maintenance.....	7
Adjustments	7
Trouble Shooting.....	8
Drive Programming.....	9
AC Drive Programming.....	10-11
Parts Lists	12-31
Wiring Diagram	32-36
PLC Programming.....	37-61

Introduction

Congratulations! Your purchase of a Kalamazoo Series 800 Horizontal Winder Stretch Wrap System will provide you with years of efficient stretch wrapping service. Your investment will ensure that your products will arrive cleaner, with less damage and pilferage at their destination at a lower cost to you.

Warranty

Kalamazoo Packaging Systems products carry a LIMITED LIFETIME WARRANTY on all K.P.S. manufactured components; all parts not manufactured by Kalamazoo Packaging Systems will be subject to the original manufacturer's warranty.

Kalamazoo Packaging systems, Inc. (KPS) agrees to furnish the purchaser, without charge, F.O.B. the factory, any part found to be defective in either material or workmanship within one (1) year from date of shipment, provided the purchaser gives immediate notice of any defect and description of that defect to KPS. KPS reserves the right to inspect any defective part to verify the defect and to determine probable cause of same.

The liability of KPS under this warranty is limited to furnishing replacements for defective parts, and unless otherwise agreed to in writing, the purchaser shall bear the expense of installation.

Failure of equipment or parts due to abuse, misuse, neglect, incorrect operating techniques or power line drops or surges shall not constitute failure because of defective material or workmanship, and are expressly excluded from this warranty.

The above is the only warranty with no other guarantees which extend beyond the above and the seller disclaims any implications including but not limited to a warranty of merchantability.

Assembly

Your Horizontal Winder has been assembled and tested at our manufacturing plant and released for shipment by a qualified technician. If the unit was shipped via common carrier or by our truck it may not be crated. **Any damage done in transit should be reported to the carrier immediately.** All our shipments are sent F.O.B. Grand Rapids, Michigan, therefore; the customer is responsible to settle any damage claims with the transportation company. Kalamazoo Packaging Systems will do everything possible to assist you in these matters.

Place the Winder in it's location.

Move the INPUT 2 conveyor with FILM HOLDER and CUTTER into place and install the locking pins.

(the INPUT 2 conveyor is installed on the same side as the film door on the winder.)

Plug in the 24-pin connector from the INPUT 2 conveyor into the control cabinet.

Plug in the air supply.

Move the INPUT 1 conveyor into place and install the locking pins.

(the INPUT 1 conveyor is installed on the same side as input 2 conveyor.)

Plug in the 10-pin connector from the INPUT 1 conveyor into the control cabinet.

Move the OUTPUT conveyor into place and install the locking pins.

(the OUTPUT conveyor is installed on the opposite side as the film door on the winder)

Plug in the 10-pin connector from the OUTPUT conveyor into the control cabinet.

Plug in the 16-pin connector from the WINDER into the control cabinet.

Wire in the main power drop cord 460/3/60hz. into the control cabinet.

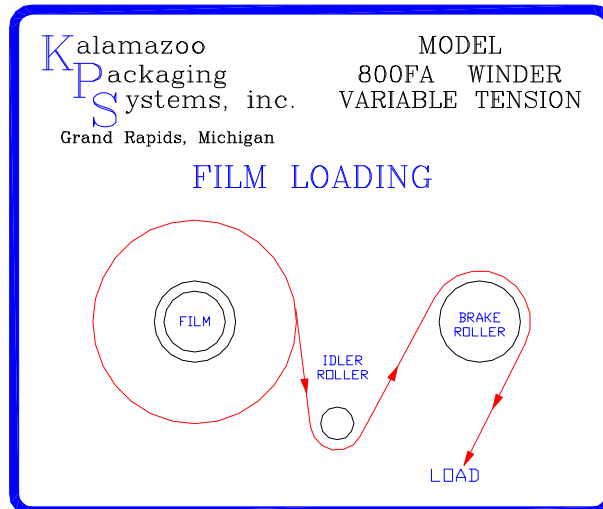
(see wiring diagram.)

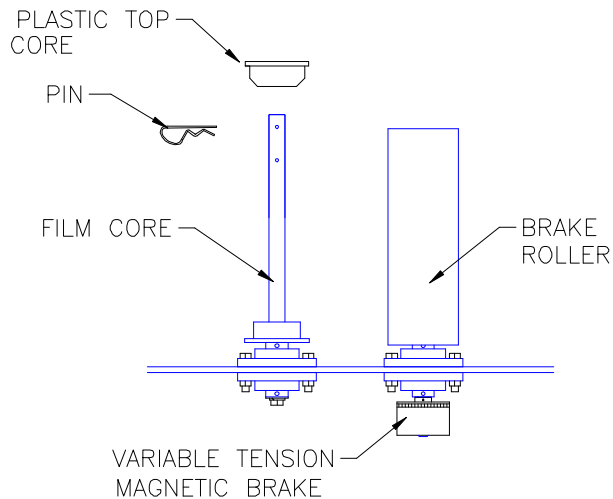
Loading Film

Air Source required 80 P.S.I.

The System is now ready for operation.

Your wrapper is equipped with a Kalamazoo Variable Tension Film Delivery System. Place a roll of 12" stretch film on the film core holder and thread the film as shown on the diagram below. Once the film is loaded and the desire film tension is arrived at the film tension need not be adjusted again until the brand of film or the film thickness is changed.





FILM LOADING AND TENSIONING

Place a roll of 20" film onto the film holder so the film unwinds clockwise, then slide the plastic top core into place and install the pin into the hole.

(note: The film core does not change the film tension.)

Thread the film as shown on the diagram.

Adjust the variable tension magnetic brake to the film tension you desire. Loosen the two set screws in the brake with a 5/64" allen wrench adjust the tension and retighten the set screws.

OPERATING CONTROLS

- 1 POWER ON: Green lighted push button; turns on the machine power and lights up the button.
- 2 POWER OFF: Red push button; turns off the machine power.
- 3 EMERGENCY STOP: Red (push off/ turn to reset); turns off all motors, air cylinders and hot wire.
- 4 CYCLE STOP: Red mushroom push button; stops the wrap cycle.
- 5 CYCLE START: Green push button starts; the wrap cycle.
- 6 WINDER RING SPEED: Potentiometer; Changes the ring speed in program "C" only
- 7 CONVEYOR SPEED: Potentiometer; Changes the input and output conveyor speeds in program "C" only
- 8 LOAD FILM: Blue push button; opens the film cutter air cylinder.
- 9 RESET: White push button; reset the machine. Moves the winder ring to home, Closes the film cutter, and moves the hold downs up.
- 10 PROGRAM A B C: Program "A" For wide panels Winder ring runs at 46RPM conveyors run at 59 FPM.
Program "B" For narrow panels Winder ring runs at 46 RPM conveyors run at 43 FPM.
Program "C" the Winder ring and conveyor speed can be change at the control console.
- 12 WINDER RING Auto/Manual: 2-position selector switch; Manually runs the Winder ring. Disengaged in the wrap cycle program.
- 13 IN CONV. FWD/AUOT/REV: 3-position selector switch; Manually runs the Input conveyor. Disengaged in the wrap cycle program.
- 14 OUT CONV. FWD/AUOT/REV: 3-position selector switch; Manually runs the Output conveyor. Disengaged in the wrap cycle program.

(If the Winder and/or Conveyors are in the manual mode the system will not cycle start.)

(If the film loading door or access door are open the system will not run.)

OPERATING INSTRUCTIONS

START UP

- 1 Turn the control cabinet disconnect to ON.
- 2 Check to make sure you have 80 P.S.I. air to the machine.
- 3 Push the Power On Green lighted push button. The green power on light will come on.

FILM LOADING

- 1 Push the blue Load Film button. (The film holder will open)
- 2 Open the film door and load the film pre the diagram on page #4.
- 3 Pull the film out and lay it across the film holder.
- 4 Close the film loading door.
- 5 Push the white Reset button. (The film holder will close.)
- 5 The system is now ready for the first load.

WRAP CYCLE

- 1 Put the load onto the input conveyor.
- 2 Push the green Cycle Start button.
- 3 The input conveyor will come on and move the product forward into the Winder.
- 4 When the product gets to input photo-eye the input hold down will come down to hold the product.
- 5 After a set time the input conveyor will stop.
- 6 The Winder will start wrapping the product and will put the reinforcing wrap on the front edge.
- 7 The Input and Output conveyors will come on and move the product through the Winder.
- 8 After the product is through the Winder the output hold down will come down.
- 9 When the end of the product gets to the input photo-eye and after a set time the conveyors will stop.
- 10 After the reinforcing wraps are applied Winder will stop and the film will be cut.
- 11 The output conveyor will come on and unload the product.
- 12 End of wrap cycle.

GENERAL MAINTENANCE

Warning!!

MAKE SURE THAT POWER SUPPLY AND AIR SUPPLY IS DISCONNECTED BEFORE ATTEMPTING TO SERVICE ANY COMPONENTS. IF THE POWER DISCONNECT OR AIR DISCONNECT IS OUT OF SIGHT, LOCK IT IN THE OPEN POSITION AND TAG IT TO PREVENT UNEXPECTED APPLICATION OF POWER.

Cleaning

Periodically clean dirt accumulations from machine, especially around moving parts and drive components, preferably by vacuuming.

General

- Check and tighten any loose fasteners.
 - Check all electric connections and replace any worn or frayed cords.
 - Check all fuses and AC controllers.
 - Make sure the air is on.
-

Lubrication

Bearings

- The bearings have been greased at the factory and are ready to run. It is recommended that all mounted bearings and support wheels be relubricated with #3 lithium base grease every three months.

Chains

- Clean, lubricate and adjust chains every month. Chain should be lubricated with a penetrating type commercial chain lube.

Gear Reducers

- For new reducers, change the oil 120 hours after the reducer starts operating (based on 8 hours per day of operation). After the first oil change, change oil every 2000 operating hours, or every six months, whichever occurs first.

Temperature	Lubricant
25° - 125° F	AGMA #8
15° - 60° F	AGMA #7

Certain conditions (dust, water, etc.) may require a change of lubricating periods as dictated by experience.

Adjustments

This is automatic system. Do not make adjustments without contacting Kalamazoo Packaging Systems.

TOUBLESHOOTING

When any problem develops, review the operating instructions. Diagnose specific problems and review the options below.

Machine not running at all.

1. Check wall receptacle for power. (This system is supplied with solid state AC drives, PLC, and sensors. A clean power source must be supplied to the system without voltage spikes or drops.)
2. Check power cord for cut. (Fork Lift Trucks damage cords.)
3. Check all fuses and breakers.
4. Check the air supply. (Air must be clean and dry)
5. Check AC drive for faults.
6. Check all limit switches and sensors for damage, sticking or internal shorts.
7. Open cabinet and check that all relays are firmly seated in their bases.
8. Visually inspect for loose wires and for any signs of arcing or burning of any of the components.
9. The film door and access door must be shut before the Winder will run.
10. Winder ring noises, use taping wax around ring edge.
11. It is advisable to call for technical assistance at this time. (616) 534-2600.

Technical and Customer Service is available from Kalamazoo Packaging Systems, Inc., Monday thru Friday 7:30 A.M. to 4:00 P.M. (EST). Stock is maintained on parts to allow us to ship the same day on most orders.

If you have a problem, we want to know about it! Please call and report any difficulties you may encounter.

- **Local - (616) 534-2600**
- **National - (800) 253-4625**

AUTOMATION DIRECT GS-2 AC DRIVE PROGRAMMING

To change a parameter in the GS-1 or 2 AC Drive.

1. Press the PROG/ENTER key.
0- will appear.
2. Use the up/down arrow key to navigate through the 10 different parameter groups.
3. Press the PROG/ENTER key.
0-00 will appear.
4. Press the PROG/ENTER key.
230 will appear. This parameter is 0-00, 230 motor voltage.

If you would like to change the ACCELERATION TIME for the WINDER RING.
(Factory set at 5.0)

1. Press the PROG/ENTER key.
0- will appear.
2. Press the up arrow key until you get to 1-
3. Press the PROG/ENTER key
1-00 will appear.
4. Press the up arrow key until you get to 1-01
5. Press the PROG/ENTER key.
5.0 will appear Factory setting
6. Use the up or down arrow key to make changes.
7. After you have made the changes press the PROG/ENTER key.
8. The display will read END.
9. Press the DISPL/RESET until it reads H 0.0
10. Programming change is complete.

880FA-12 WINDER RING GS2 AC DRIVE

New AC drives only: Before changing parameter reset the drive to factory defaults (9-08 = 99)

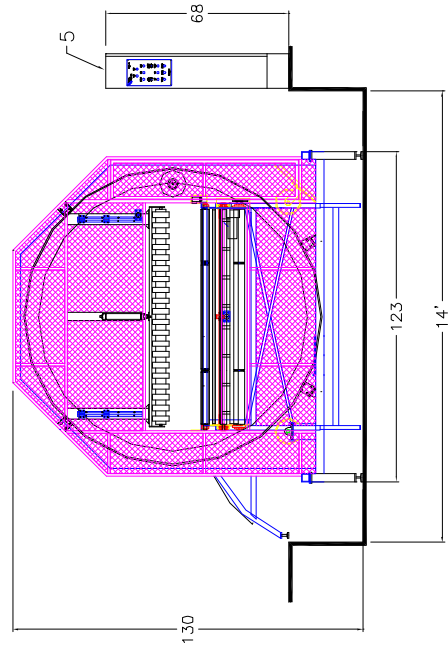
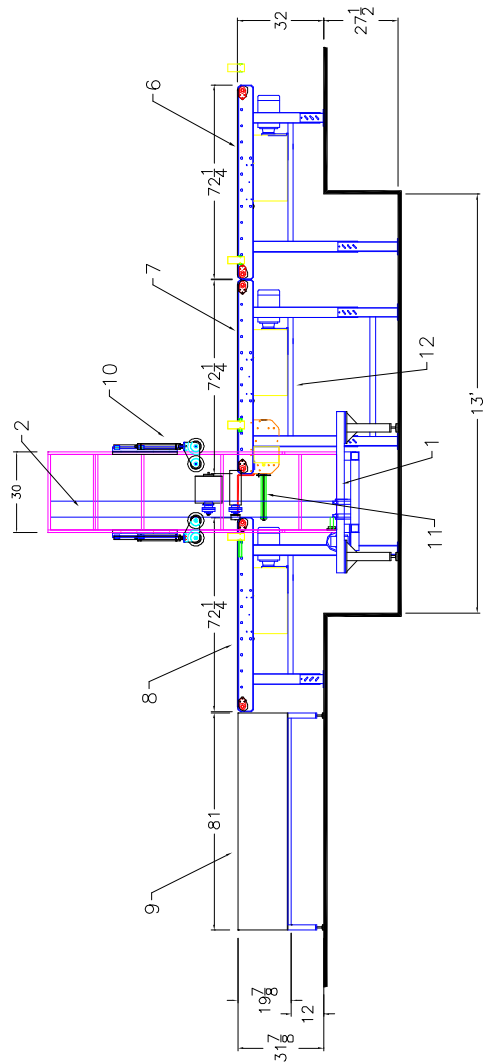
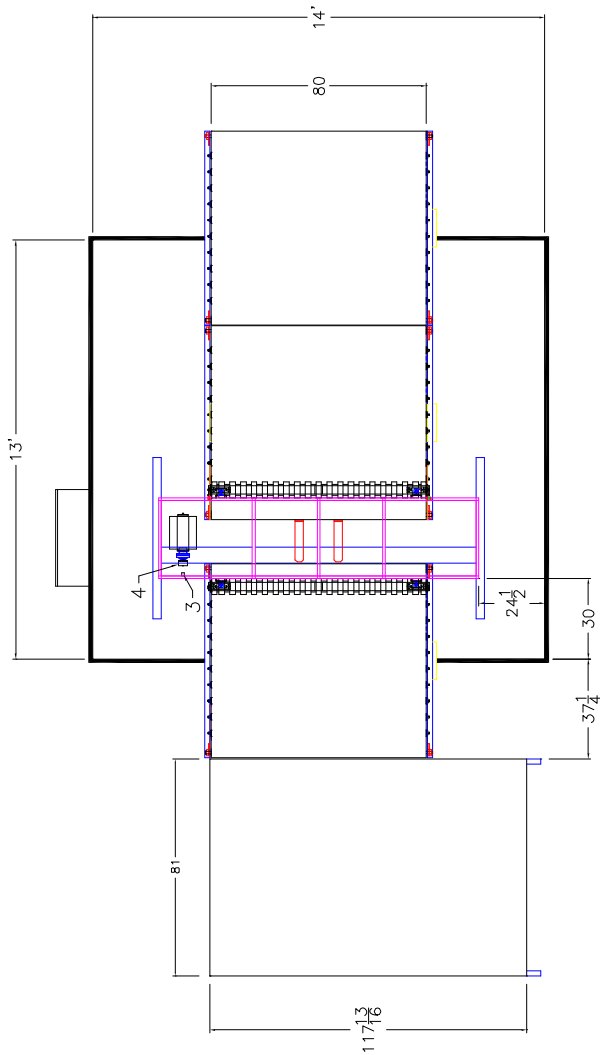
0-00	240	DEFAULT	MOTOR VOLTAGE
0-01	10.0	CHANGE	MOTOR AMP
0-02	60	DEFAULT	MOTOR FREQUENCY
0-03	1750	DEFAULT	MOTOR RPM
0-04	1750	DEFAULT	MOTOR MAX. FREQ.
1-00	0	DEFAULT	RAMP TO STOP
1-01	5.0	CHANGE	ACCE. TIME 1
1-02	8.0	CHANGE	DEC. TIME 1
1-03	0	DEFAULT	ACCE. S-CURVE
1-04	0	DEFAULT	DEC. S-CURVE
1-05	10.0	DEFAULT	ACCE. TIME 2
1-06	30.0	DEFAULT	DEC. TIME 2
1-07	0	DEFAULT	METHOD TO USE
1-08	0.0	DEFAULT	ACCE 1-2 FREQ.
1-09	0.0	DEFAULT	DEC 1-2 FREQ.
1-10	0.0	DEFAULT	SKIP FREQ.1
1-11	0.0	DEFAULT	SKIP FREQ. 2
1-12	0.0	DEFAULT	SKIP FREQ. 3
1-17	0.0	DEFAULT	SKIP FREQ. BAND
1-19	0	DEFAULT	DC INJECTION LEVEL
1-20	0.0	DEFAULT	DC INJECTION START-UP
1-21	0.0	DEFAULT	DC INJECTION STOPPING
1-22	0.0	DEFAULT	START POINT DC INJECTION
2-00	1	CHANGE	GENERAL PURPOSE
2-01	0.0	DEFAULT	SLIP COMP.
2-03	0	DEFAULT	MANUAL TORQUE BOOST
2-04	1.5	DEFAULT	MID-POINT FREQ.
2-05	10.0	DEFAULT	MID-POINT VOLT
2-06	1.5	DEFAULT	MIN. OUTPUT FREQ.
2-07	10.0	DEFAULT	MIN. OUTPUT VOLT
2-08	10	DEFAULT	PW/M CARRIER FREQ.
3-00	2	CHANGE	EXTERNAL CONTROL TERMINALS, STOP DISABLED
3-01	0	DEFAULT	DI1-FWD./STOP DI2-REV/STOP
3-02	3	CHANGE	MULTI-SPEED BIT 1
3-03	4	CHANGE	MULTI SPEED BIT 2
3-04	5	CHANGE	MULTI-SPEED BIT 3
3-05	6	CHANGE	MULTI SPEED BIT 4
3-11	0	DEFAULT	AC DRIVE RUNNING
3-16	0.0	DEFAULT	DESIRED FREQ.
3-17	0.0	DEFAULT	DESIRED CURRENT
4-00	2	CHANGE	EXTERNAL POT.
4-01	0	DEFAULT	NO OFFSET
4-02	0.0	DEFAULT	ANALOG INPUT OFFSET
4-03	100.0	DEFAULT	ANALOG INPUT GAIN
4-04	0	DEFAULT	ANALOG INPUT REV.
4-05	0	DEFAULT	LOSS OF ACI
5-00	6.0	DEFAULT	JOG
5-01	60.0	CHANGE	MULTI SPEED 1
5-02	60.0	CHANGE	MULTI SPEED 2
5-03	7.0	CHANGE	MULTI SPEED 3
5-04	0	DEFAULT	MULTI SPEED 4
6-00			
THUR			
9-42		DEFAULT	

80PBRC72 POWERED BELT CONVEYORS GS2 AC DRIVE

New AC drives only: Before changing parameter reset the drive to factory defaults (9-08 = 99)

0-00	240	DEFAULT	MOTOR VOLTAGE
0-01	7.0	CHANGE	MOTOR AMP
0-02	60	DEFAULT	MOTOR FREQUENCY
0-03	1750	DEFAULT	MOTOR RPM
0-04	1750	DEFAULT	MOTOR MAX. FREG.
1-00	0	DEFAULT	RAMP TO STOP
1-01	0.2	CHANGE	ACCE. TIME 1
1-02	0.2	CHANGE	DEC. TIME 1
1-03	0	DEFAULT	ACCE. S-CURVE
1-04	0	DEFAULT	DEC. S-CURVE
1-05	10.0	DEFAULT	ACCE. TIME 2
1-06	30.0	DEFAULT	DEC. TIME 2
1-07	0	DEFAULT	METHOD TO USE
1-08	0.0	DEFAULT	ACCE 1-2 FREG.
1-09	0.0	DEFAULT	DEC 1-2 FREG.
1-10	0.0	DEFAULT	SKIP FREG.1
1-11	0.0	DEFAULT	SKIP FREG. 2
1-12	0.0	DEFAULT	SKIP FREG. 3
1-17	0.0	DEFAULT	SKIP FREG. BAND
1-19	0	DEFAULT	DC INJECTION LENEL
1-20	0.0	DEFAULT	DC INJECTION START-UP
1-21	0.0	DEFAULT	DC INJECTION STOPPING
1-22	0.0	DEFAULT	START PIONT DC INJECTION
2-00	0	DEFAULT	GENERAL PURPOSE
2-01	0.0	DEFAULT	SLIP COMP.
2-03	5	DEFAULT	MANUAL TORQUE BOOST
2-04	1.5	DEFAULT	MID-PIONT FREG.
2-05	10.0	DEFAULT	MID-PIONT VOLT
2-06	1.5	DEFAULT	MIN. OUTPUT FREG.
2-07	10.0	DEFAULT	MIN. OUTPUT VOLT
2-08	10	DEFAULT	PW/M CARRIER FREG.
3-00	2	CHANGE	EXTERNAL CONTROL TERMINALS,STOP DISABLED
3-01	0	DEFAULT	DI1-FWD./STOP DI2-REV/STOP
3-02	3	CHANGE	MULTI-SPEED BIT 1
3-03	4	CHANGE	MULTI SPEED BIT 2
3-04	5	CHANGE	MULTI-SPEED BIT 3
3-05	6	CHANGE	MULTI SPEED BIT 4
3-11	0	DEFAULT	AC DRIVE RUNNING
3-16	0.0	DEFAULT	DESIRED FREG.
3-17	0.0	DEFAULT	DESIRED CURRENT
4-00	2	CHANGE	EXTURNAL POT.
4-01	0	DEFAULT	NO OFFSET
4-02	0.0	DEFAULT	ANALOG INPUT OFFSET
4-03	100.0	DEFAULT	ANALOG INPUT GAIN
4-04	0	DEFAULT	ANALOG INPUT REV.
4-05	0	DEFAULT	LOSS OF ACI
5-00	6.0	DEFAULT	JOG
5-01	50.0	CHANGE	MULTI SPEED 1
5-02	45.0	CHANGE	MULTI SPEED 2
5-03	0	DEFAULT	MULTI SPEED 3
5-04	0	DEFAULT	MULTI SPEED 4
6-00			
THUR			
9-42		DEFAULT	

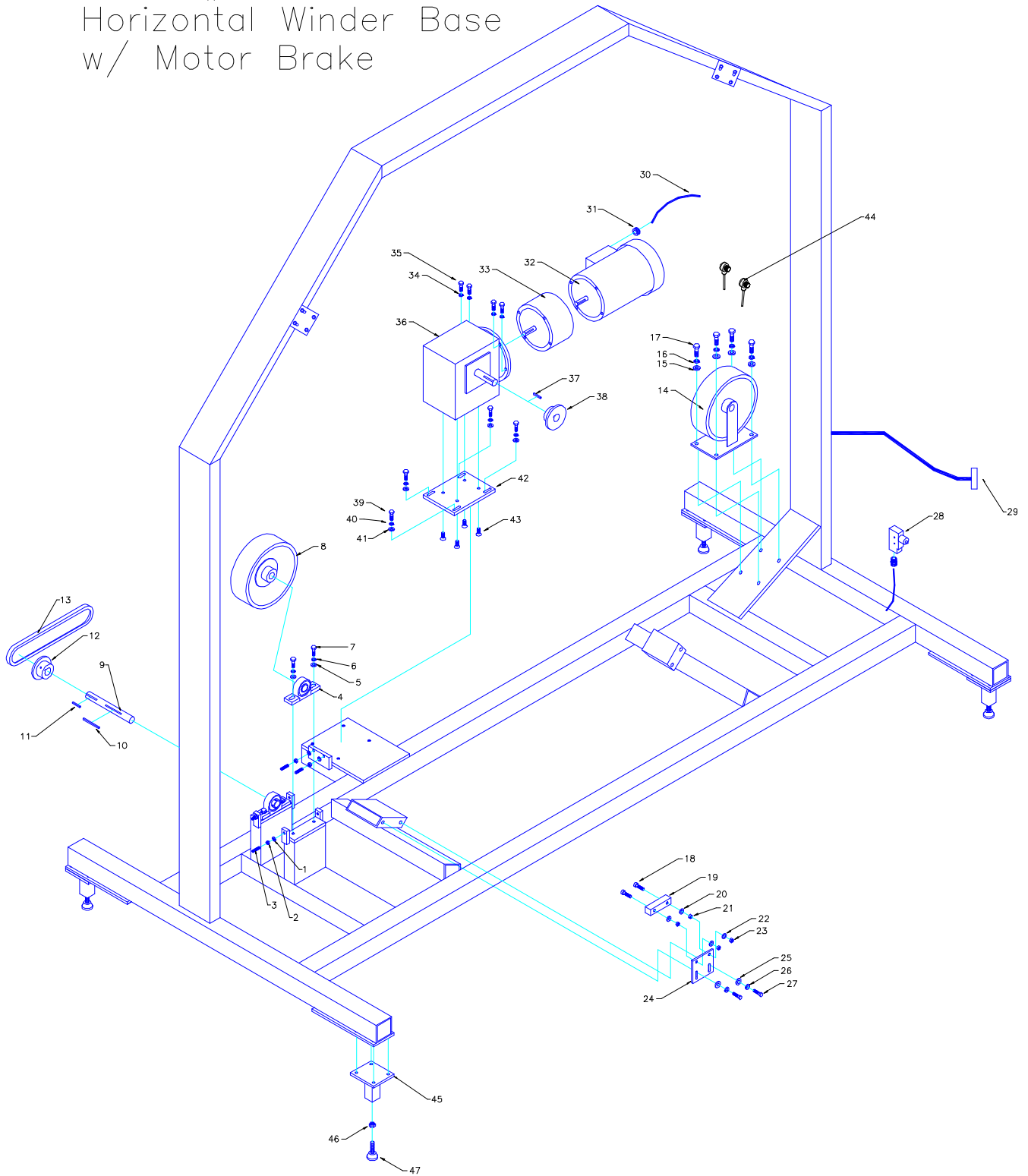
Kalamazoo
Packaging
Systems
Model#
880FA-12-80PBRC72



PARTS MANUAL: 880FA-12-80PBRC72 LAYOUT

ITEM	PART#	DESCRIPTION	PAGE#	QTY
1		WINDER BASE FRAME	14-16	1
2		WINDER RING	17-18	1
3	213180	T18 POLARIZED SENSOR 10-30v DC (RING HOME)		1
3	213180	T18 POLARIZED SENSOR 10-30v DC (LOAD FILM)		1
4	212383	3" PHOTO-EYE REFLECTOR (ON THE RING)		1
5		CONTROL CABINET	19-20	1
5		SUBPANEL	21-22	1
6		INPUT 1 CONVEYOR		
7		INPUT 2 CONVEYOR	25-26	1
8		OUTPUT CONVEYOR	25-26	1
9		880STD SLIDE TABLE DROP		1
10		AIR PRODUCT HOLD DOWNS	24	1
11		FILM HOLD AND CUTTER	27	1
12		AIR SYSTEM	28	1

Kalamazoo
Packaing
Systems
Model #800FA
Horizontal Winder Base
w/ Motor Brake



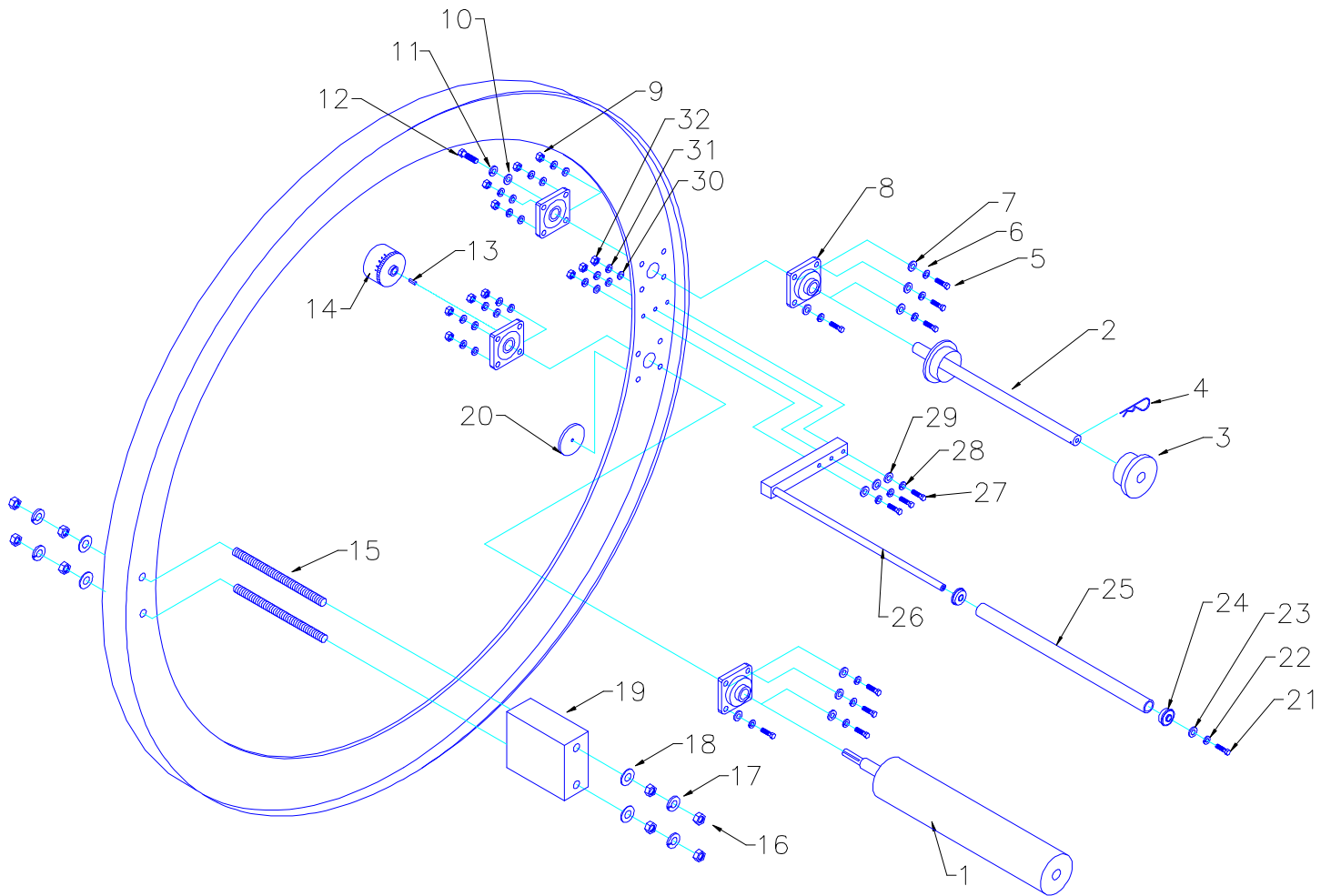
PARTS MANUAL: 880FA-12 HORIZONTAL WINDER

ITEM	PART #	GRAINGER	DESCRIPTION	QTY
1	L48		5/16 USS WASHER	4
2	L47		5/16 LOCK WASHER	4
3	L54		5/16-18x 1-1/2" SET SCREW	4
4	121250	5X692	1" PILLOW BLOCK BEARING	2
5	L65		3/8 USS WASHER	4
6	L64		3/8 LOCK WASHER	4
7	L83		3/8-16x 1-1/2" HEX HEAD CAP SCREW	4
8	122806		10"x 3" 95D DRIVE WHEEL w/ HUB	1
9	800V-DS		800V DRIVE SHAFT	1
10	L3		1/4"x 1/4"x 2-1/2" KEYWAY	1
11	L3		1/4"x 1/4"x 1" KEYWAY	1
12	108124		DRIVEN SPROCKET 50BTL24	1
12	108215		1" BUSHING FOR ABOVE	1
13	108500	6L074	# 50 CHAIN	1
14	122804		10"x 3"95D IDLER WHEEL w/ TAPERED BEARINGS	1
15	L96		7/16 USS WASHER	4
16	L95		7/16 LOCK WASHER	4
17	L99		7/16-14 x 1-1/2" HEX HEAD CAP SCREW	4
18	L73		3/8-24 x 1-1/2" ALLEN HEAD CAP SCREW	16
19	800SLIDE		800 SLIDE	8
20	L48		5/16 USS WASHER	16
21	L61		3/8-24 NYLOCK JAM NUT	16
22	L48		5/16 USS WASHER	16
23	L61		3/8-24 NYLOCK JAM NUT	16
24	800S-HOLDER		800 SLIDE HOLDER	8
25	L65		3/8 USS WASHER	16

PARTS MANUAL: 880FA-12 HORIZONTAL WINDER

ITEM	PART #	GRAINGER	DESCRIPTION	QTY
26	L64		3/8 LOCK WASHER	12
27	L71		3/8-24x 1-1/4" HEX HEAD CAP SCREW	12
28	210852	2W938	LIMITS SWITCH -PLUNGER	1
29	210311		16-PIN QUICK CONNECTOR MALE (WINDER)	1
30	20990	1W926	14/3 SJ CORD	1
31	210340	2A247	CORD GRIP	1
32	105557		3hp 230/3/60hz H.D. WINDER MOTOR 140TC FACE	1
33	107300		MOTOR BRAKE	1
34	L64		3/8 LOCK WASHER	4
35	L80		3/8-16 x 1" HEX HEAD CAP SCREW	4
36	106603	1L317	5:1 R/A REDUCER 2.06CD 145TC FACE (WINDER)	1
37	L3		1/4"x 1/4"x 1" KEYWAY	1
38	108117		DRIVE SPROCKET 50BLT17	1
38	108132		1" BUSHING FOR ABOVE	1
39	L82		3/8-16 x 1-1/2" HEX HEAD CAP SCREW	4
40	L64		3/8 LOCK WASHER	4
41	L65		3/8 USS WASHER	4
42	860FA-12-MM		860FA-12 MOTOR MOUNT	1
43	L81		3/8-16 x 1" FLAT HEAD	4
44	213180		T18 POLARIZED SENSOR 10-30v DC	2
45	800-RFM		WINDR RUBBER FOOT MOUNT	4
46	L125		1/2-13 NUT	4
47	122851		1/2-13 RUBBER FEET	4

Kalamazoo Packaging Systems
Model #800FA-12-RING
Variable Tension Ring
w/ Pined Top Core



PARTS MANUAL: 880FA-12 WINDER RING

ITEM	PART #	DESCRIPTION	QTY
1	623070	800 12" WINDER VARIABLE TENSION 4" BRAKE ROLLER	1
2	623072	800 10-12" WINDER VARIABLE TENSION FILM CORE w/ PIN	1
3	623078	3" PLASTIC TOP CORE	1
4	623079	3/16" HITCH PIN	1
5	L102	7/16-20 x 2-1/4" HHCS	8
6	L95	7/16 LOCK WASHER	8
7	L97	7/16 SAE WASHER	8
8	121140	1" 4-BOLT FLANGE BEARING	4
9	L165	7/16-20 NYLOCK NUT	8
10	L111	1/2" USS WASHER	1
11	L110	1/2" LOCK WASHER	1
12	L128	1/2-13 x 1" HHCS	1
13	L2	3/16"x 3/16"x 3/4" KEYWAY	1
14	130550	5/8" FINISH BORE MAGNETIC BRAKE	1
15	L162	3/4-10 x 11.0" THREADED ROD	2
16	L157	3/4-10 NUT	8
17	L158	3/4" LOCK WASHER	4
18	L159	3/4" USS WASHER	4
19	800CW-12	COUNTER WEIGHT	1
20	212383	3" PHOTO-EYE REFLECTOR	1

PARTS MANUAL: 880FA-12 WINDER RING

ITEM	PART #/DWG. #	DESCRIPTION	QTY
		OPTIONAL: VARIABLE TENSION BRAKE IDLER ROLLER	
21	L80	3/8-16x 1" HHCS	1
22	L64	3/8" LOCK WASHER	1
23	L65	3/8" USS WASHER	1
24	120600	5/8" I.D. x 1-3/8" O.D. FLANGED BEARING	2
25	537125	PVC 1-1/4 TUBE sch.40 x 21-3/8"	1
26	800-20-BIR	BRAKE IDLER ROLLER MOUNT	1
27	L68	3/8-16x 2-1/2" HHCS	3
28	L64	3/8" LOCK WASHER	3
29	L65	3/8" USS WASHER	3
30	L65	3/8" USS WASHER	3
31	L64	3/8" LOCK WASHER	3
32	L78	3/8-16 NYLOCK NUT	3

Kalamazoo
Packaging
Systems, inc.

880FA-12-80PBRC72

POWER
ON



POWER
OFF



EMERGENCY
STOP



CYCLE
STOP

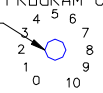


CYCLE
START



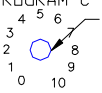
RING
SPEED
PROGRAM C

6



CONVEYOR
SPEED
PROGRAM C

7



LOAD
FILM



RESET



PROGRAM
A B C



WINDER RING
AUTO/MANUAL



IN CONV.
FWD/AUTO/REV



OUT CONV.
FWD/AUTO/REV



PRODUCT FORKS
IN/OFF/OUT



MADE IN THE USA
(616)534-2600

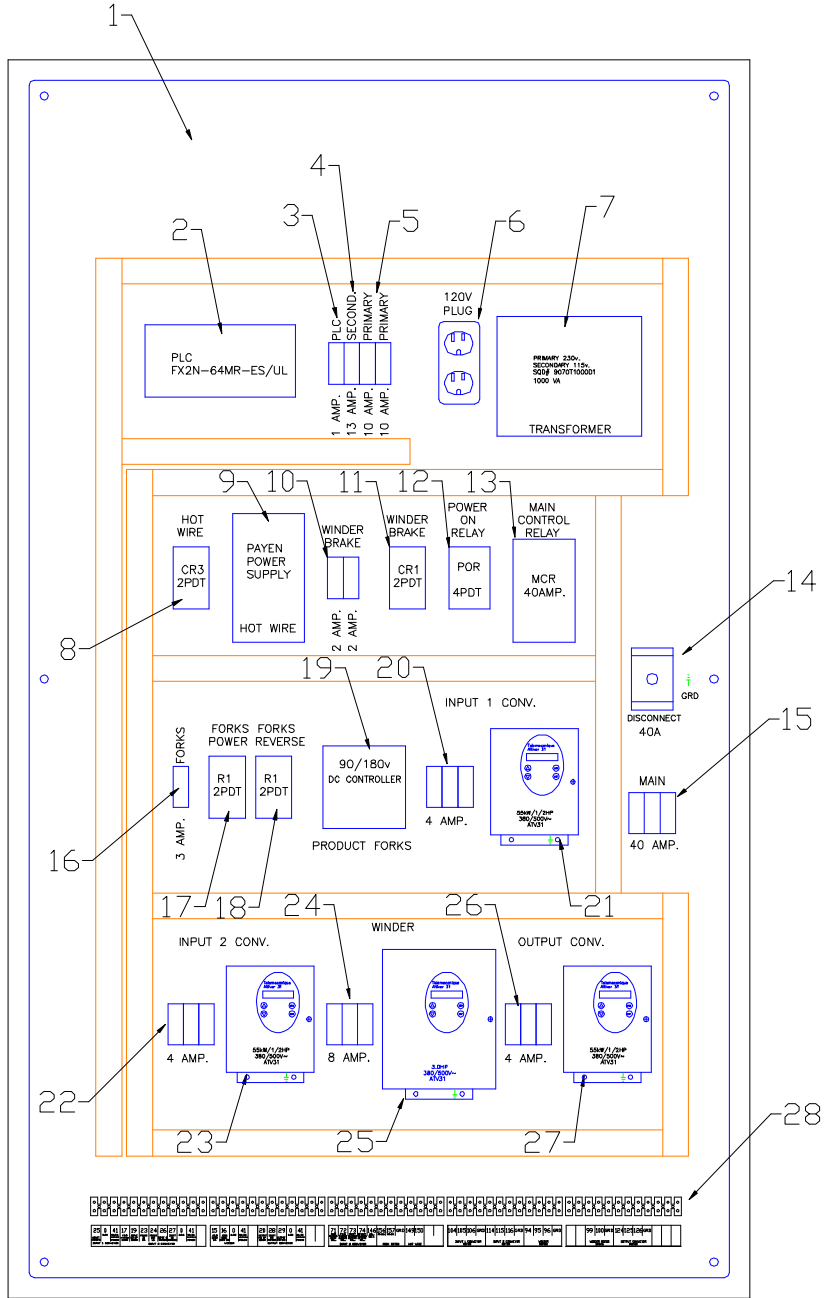
15



PARTS MANUAL: 880FA-12 CONTROL CABINET

ITEM	PART #	DESCRIPTION	QTY
1	207069	GREEN LIGHTED PUSH BUTTON (POWER ON)	1
2	207055	RED BUTTON (POWER OFF)	1
3	207110	PUSH OFF/ TURN TO RESET (E-STOP)	1
4	207050	RED MUSHROOM PUSH BUTTON (CYCLE STOP)	1
5	207001	GREEN PUSH BUTTON (CYCLE START)	1
6	131600	SPEED POTENTIONMETER (WINDER PROGRAM C)	1
7	131600	SPEED POTENTIONMETER (CONV. PROGRAM C)	1
8	207056	BLUE PUSH BUTTON (FILM LOAD)	1
9	207057	WHITE PUSH BUTTON (RESET)	1
10	207103	3-POS. SELECTOR (PROGRAM A B C)	1
11	207100	2-POS. SELECTOR (WINDER AUTO/MANUAL	1
12	207103	3-POS. SELECTOR (IN CONV. FWD/AUOT/REV)	1
13	207103	3-POS. SELECTOR (OUT CONV. FWD/AUOT/REV)	1
14	207103	3-POS. SELECTOR (PRODUCT FORKS IN/OFF/OUT)	1
15	880FA-12-80PBRC72 DECAL	880FA-12-80PBRC72 CONTROL CABINET DECAL	1

Kalamazoo
Packaging
Systems
Model #880FA-12-80PBRC72
SUB PANEL LAYOUT



25	0	41	17	19	23	24	26	27	0	41	15	16	0	41	20	28	29	0	41	71	72	73	74	46	56	57	GRD	149	150	104	105	106	GRD	114	115	116	GRD	94	95	96	GRD	99	100	GRD	124	125	126	GRD			
INPT 1 CONV	OUT	PLC	PLC	PLC	PLC	PLC	PLC	PLC	OUT	PLC	PLC	PLC	PLC	PLC	INPT 1 CONV	INPT 2 CONV	INPT 2 CONV	PLC	PLC	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV	INPT 1 CONV

PARTS MANUAL: 880FA-12-80PBRC72 SUBPANEL

ITEM	PART #	DESCRIPTION	QTY
1	4836P	SUBPANEL	1
2	220187	MITSUBISHI PLC 60 I/O	1
3	211011	1 AMP BRAEKER (PLC)	1
4	211131	13 AMP BRAEKER (SECONDARY)	1
5	211102	10 AMP 2-POLE BRAEKER (PRIMARY)	1
6	210155	110 VOLT OUT LET	1
7	209104	TRANSFORMER 1000VA	1
8	208250	2PDT RELAY (HOT WIRE POWER)	1
8	208260	8-PIN BASE	1
9	131201	PAYNE CONTROL (HOT WIRE)	1
10	210022	2 AMP 2-POLE BRAEKER (WINDER BRAKE)	1
11	208250	2PDT RELAY (WINDER MOTOR BRAKE)	1
11	208260	8-PIN BASE	1
12	208450	4PDT RELAY (POWER OFF RALEY)	1
13	208090	40 AMP MAIN CONTROL RELAY	1
14	210744	DISCONNECT 4 N.O. 40 AMP	1
14	210747	DISCONNECT SHAFT	1
14	210746	DISCONNECT SELECTOR HANDLE	1
15	211403	40 AMP. 3-POLE BRAEKER (MAIN)	1
16	211031	3 AMP. BREAKER (FORKS)	1
17	208250	2PDT RELAY (FORK POWER)	1
17	208260	8-PIN BASE	1
18	208250	2PDT RELAY (FORKS REVERSE)	1
18	208260	8-PIN BASE	1
19	131200	90/180 volt DC CONTROL (FORKS)	1

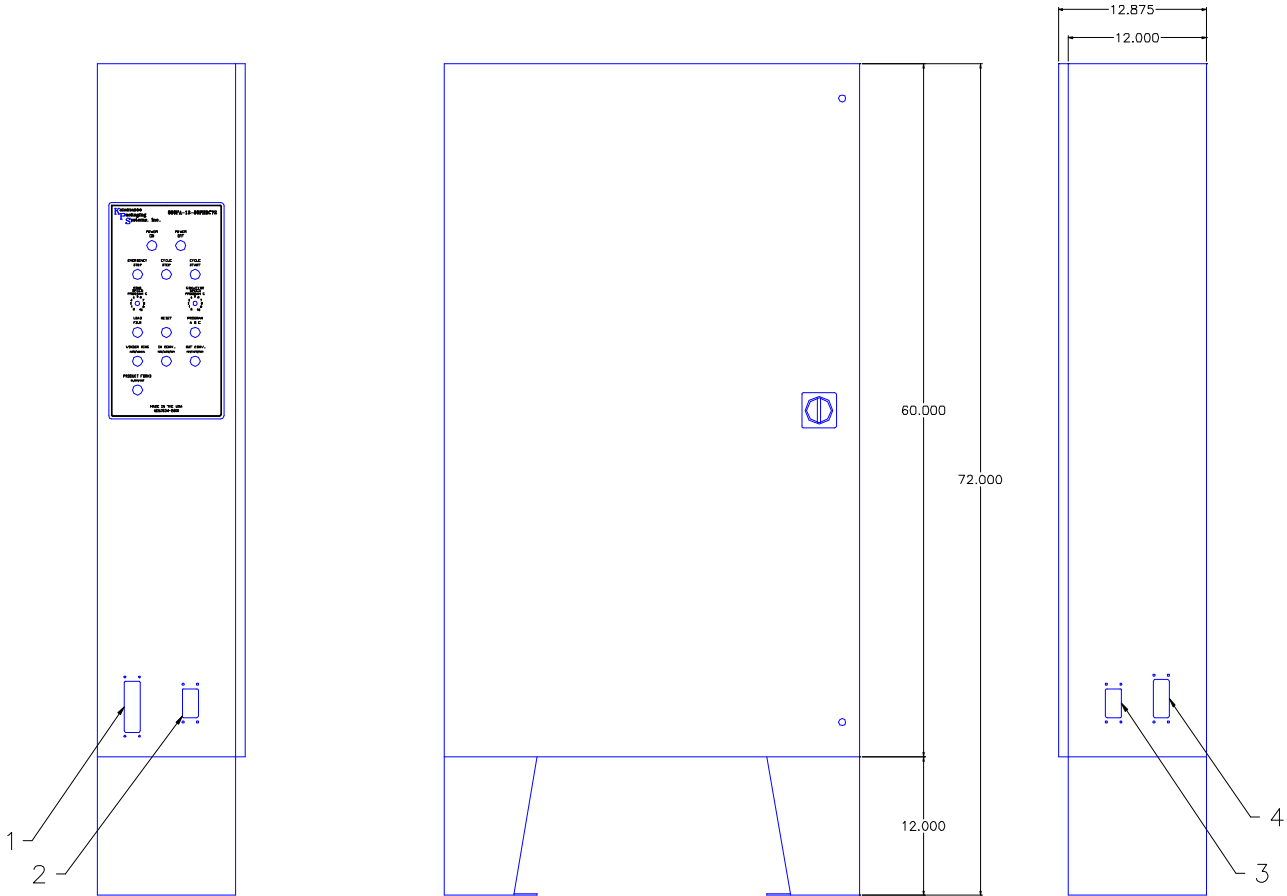
PARTS MANUAL: 880FA-12-80PBRC72 SUBPANEL

ITEM	PART #	DESCRIPTION	QTY
20	211043	4 AMP 3-POLE BRAEKER (INPUT 1 CONV.)	1
21	131875	AC DRIVE 2hp. 460v IN 460v OUT (INPUT 1 COVN.)	1
22	211043	4 AMP 3-POLE BRAEKER (INPUT 2 CONV.)	1
23	131875	AC DRIVE 2hp. 460v IN 460v OUT (INPUT 2 COVN.)	1
24	211083	8 AMP 3-POLE BRAEKER (WINDER)	1
25	131876	AC DRIVE 3hp. 460v IN 460v OUT (WINDER)	1
26	211043	4 AMP 3-POLE BRAEKER (INPUT 2 CONV.)	1
27	131875	AC DRIVE 2hp. 460v IN 460v OUT (INPUT 2 COVN.)	1
28	209700	12 POLE TERMINAL STRIP	5

PARTS MANUAL: 880FA-12-80PBRC72 CONTROL CABINET

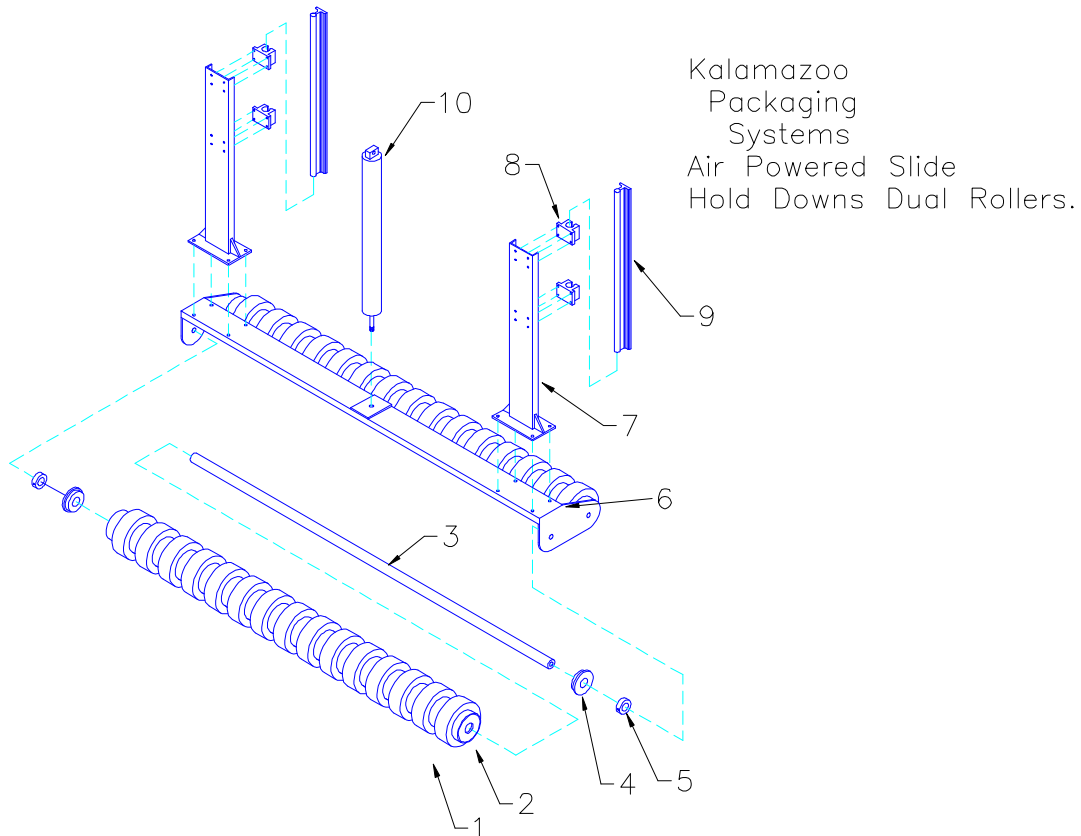
ITEM	PART #	DESCRIPTION	QTY
1	210312	24-PIN QUICK CONNECTOR FEMALE (INPUT 2 CONVEYOR)	1
2	210310	10-PIN QUICK CONNECTOR FEMALE (INPUT 1 CONVEYOR)	1
3	210310	10-PIN QUICK CONNECTOR FEMALE (OUTPUT CONVEYOR)	1
4	210311	16-PIN QUICK CONNECTOR FEMALE (WINDER)	1

Kalamazoo
Packaging
Systems
Model# 880FA-12-80PBRC72
Control Cabinet Layout

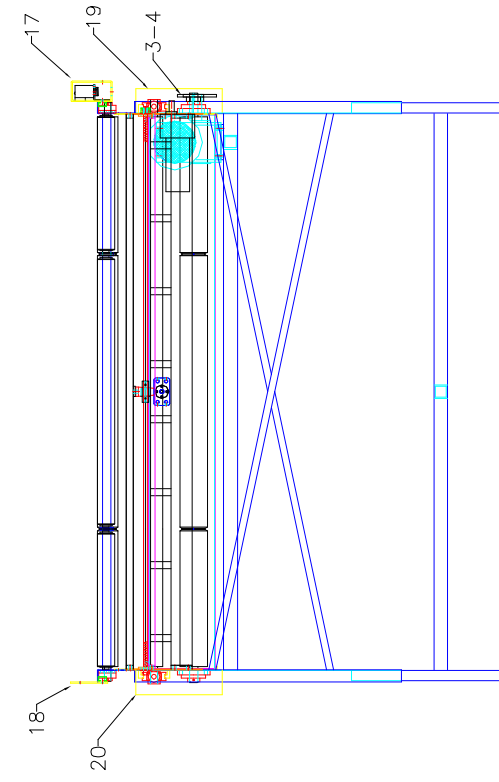
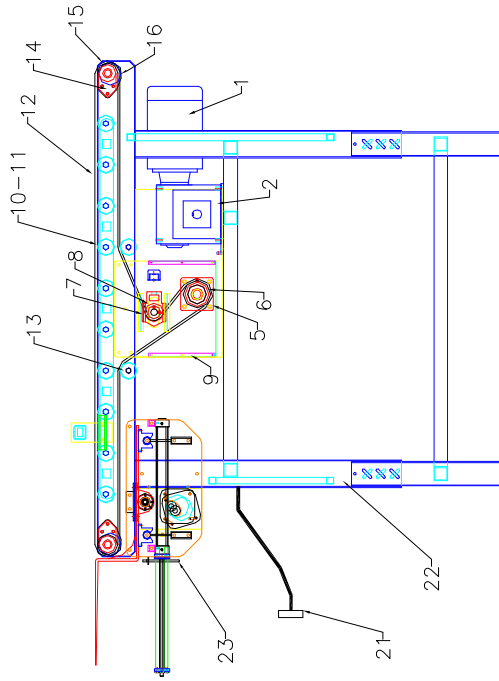


PARTS MANUAL: 880FA-12 AIR POWERED SLIDE HOLD DOWNS w/ DUAL ROLLERS

ITEM	PART #	DESCRIPTION	QTY
1	538023	6" FOAM RUBBER WHEELS GLUE & TAPED (1"x 2"x 17.25")	40
2	860FA-20- HD60-04	4" PVC TUBE WITH CAPS x 79-3/4"	2
3	880FA-12- HD80-04	5/8" G&P SHAFT x 81-1/2" TAP BOTH END 3/8-16x 1"	2
4	120600	5/8x 1-3/8 FLANGE BEARING	4
5	121500	5/8" SHAFT COLLARS	4
6	880FA-12- HD80-03	880FA-12 HOLD DOWN ROLLER MOUNT ASSEMBLY FOR DUAL ROLLERS	1
7	880FA-12- HD80-02	880FA-12 HOLD DOWN SLIDE ASSEMBLY	2
8	121219	3/4" PILLOW BLOCK LINEAR BEARING (OPEN)	4
9	121194	3/4" SHAFT and RAIL ASSEMBLY	4
10	270152	2" CYLINDER 12" STROKE	1
10	270153-1	PIVOT BRACKET END NOUNT	1



Kalamazoo
 Packaging
 Systems
 Model# 80PBRC72
 Powered Belt Roller
 Conveyor.

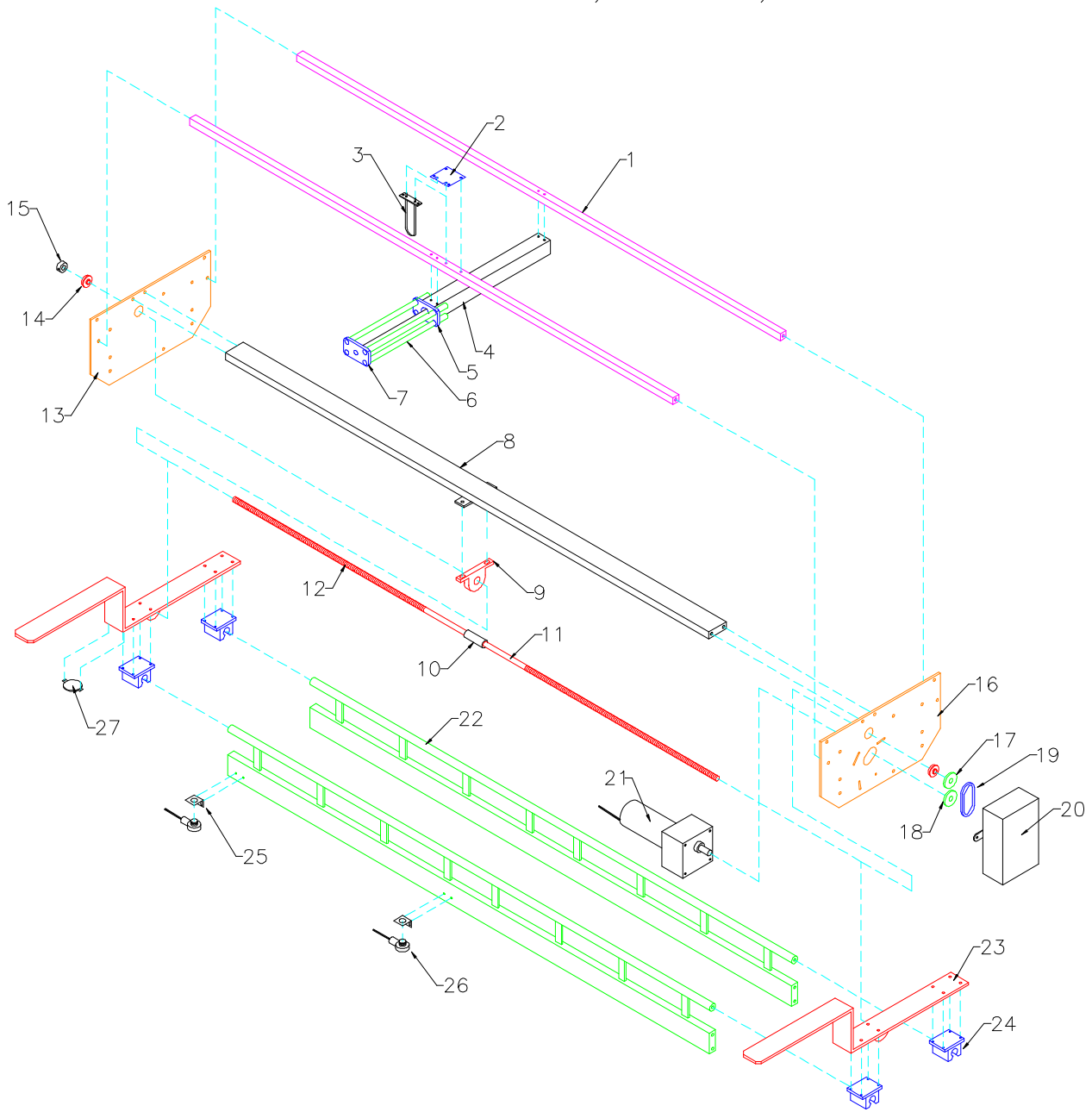


Kalamazoo Packaging Systems

PARTS MANUAL: 80PBRC72 POWERED BELT ROLLER CONVEYOR

ITEM	PART #	DESCRIPTION	QTY
1	105527	2HP. 230/3/60HZ. AC MOTOR 145TC FACE	1
2	106625	BOSTON R/A REDUCER 40:1 3.25 CD 140TC FACE	1
3	108153	DRIVE SPROCKET 60B22x1-3/8"	1
4	108152	DRIVEN SPROCKET 60B16x1-1/4"	1
5	121150	1-1/4" 4-BOLT FLANGE BEARING	2
6	80PBRC72-17	880PBRC72 4" DRIVE ROLLER	1
7	880PBRC72-19	80PBRC72 2-1/2" TAKE-UP ROLLER	1
8	121066	1-1/4" TAKE-UP BEARING	2
9	80PBRC72-12	80PBRC72 DRIVE ROLLER END COVER	2
10	80PBRC72-15	39-5/8" x 2-1/2" IDLER ROLLER (CENTER)	10
11	80PBRC72-14	20-5/16"x 2-1/2 IDLER ROLLER (OUTSIDES)	20
12	80PBRC72-BELT	80PBRC72 BELT (BLACK RUFF TOP)	1
13	80PBRC72-16	81"x 2-1/2" IDLER ROLLER	2
14	80PBRC72-13	80PBRC72 3" END ROLLER	2
15	860PBRC-120-11	860PBRC120 END ROLLER GUARD	2
16	121054	1" CHEVRON BEARING	4
17	213265	PHOTO-EYE POLARIZED 10-30v DC	2
17	213264	PHOTO-EYE CABLE 30'	2
18	212381	2.2" PHOT-EYE REFLECTOR	1
19	80PBRC72-08	80PBRC72 DRIVE SIDE GUARD	1
20	80PBRC72-09	80PBRC72 DRIVEN SIDE GUARD	1
21	210310	10-PIN QUICK CONNECTOR MALE (INPUT 1 CONVEYOR)	1
21	210312	24-PIN QUICK CONNECTOR MALE (INPUT 2 CONVEYOR)	1
21	210310	10-PIN QUICK CONNECTOR MALE (OUTPUT CONVEYOR)	1
23	80PBRC72-INPUT1-01	INPUT 1 CONVEYOR FRAME	1
23	80PBRC72-INPUT2-01	INPUT 2 CONVEYOR FRAME	1
23	80PBRC72-OUTPUT-01	OUTPUT CONVEYOR FRAME	1
22		SEE FILM HOLDER, CUTTER, and FORKS (page 28-29)	1

Kalamazoo
Packaging
Systems
Model# 880FA-12-80PBRC72
Film Holder, Cutter, and Forks



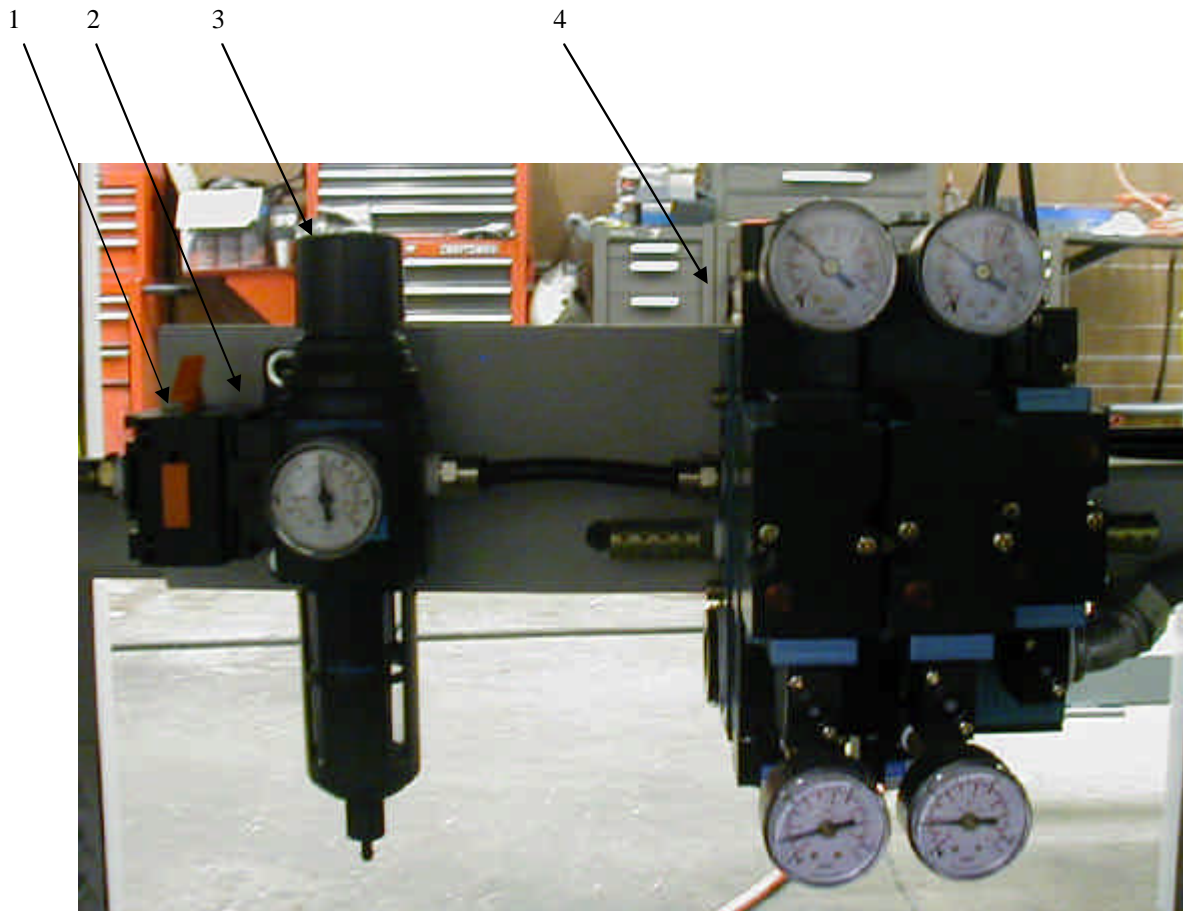
PARTS MANUAL: 880FA-12-80PBRC72

FILM HOLDER, CUTTER, and FORKS

ITEM	PART # / DWG. #	DESCRIPTION	QTY
1	880PBRC72-23	FILM CYLINDER CROSS MOUNTS	2
2	131009	4-1/2" TUBE HOT WIRE	1
3	800-AFC-08	TUBE HOT WIRE MOUNT	1
4	270129	FILM HOLDER CYLINDER 1-1/2" BORE x 16" STROKE	1
4	270131	FILM CUTTER LIMIT SWITCH	1
4	270132	FILM CUTTER LIMIT SWITCH BAND	1
5	800-AFC-01	4 ROD CYLINDER END CAP	1
6	800071	5/8" TEFLON SHAFT x 18.0"	4
7	800-AFC-08	4 ROD CYLINDER ROD CAP	1
8	880FA-12-FORK-05	FORK SCREW SUPPORT	1
9	121250	1" PILLOW BLOCK (1-7/16")	1
10	880FA-12-FORK-06C	FORK SCREW COUPLER	1
11	880FA-12-FORK-05A	LEFT FORK SCREW	1
12	880FA-12-FORK-05B	RIGHT FORK SCREW	1
13	80PBRC72-05a	FORK DRIVEN PLATE	1
14	120600	5/8" I.D. x 1-3/8" O.D. FLANGED BEARING	2
15	121500	5/8" SHAFT COLLAR	
16	80PBRC72-04a	FORK DRIVE PLATE	1
17	107973	40b12x 5/8" SPROCKET	1
18	107974	40b12x 3/4" SPROCKET	1
19	108405	#40 CHAIN	1
20	80PBRC72-10	FORK CHAIN GUARD	1
21	6ML59	90v DC GEARMOTOR (250 RPM)	1
22	880FA-12-FORK-04	PRODUCT FORK RAIL	2
23	880FA-12-FORK	PRODUCT FORKS	2
23	121232	RIGHT HAND AMCE NUT (5 TURNS PER INCH)	
23	121233	LEFT HAND AMCE NUT (5 TURNS PER INCH)	
24	121223	1" PILLOW BLOCK LINEAR BEARING	4
25	213181	T18 90 DEGREE SENSOR MOUNT	2
26	213180	T18 BANNER SENSOR	2
27	213182	2" BANNER RETOREFLECTIVE TARGET	1

PARTS MANUAL: 880FA Air Filter/Regulator

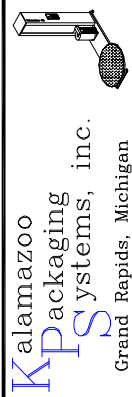
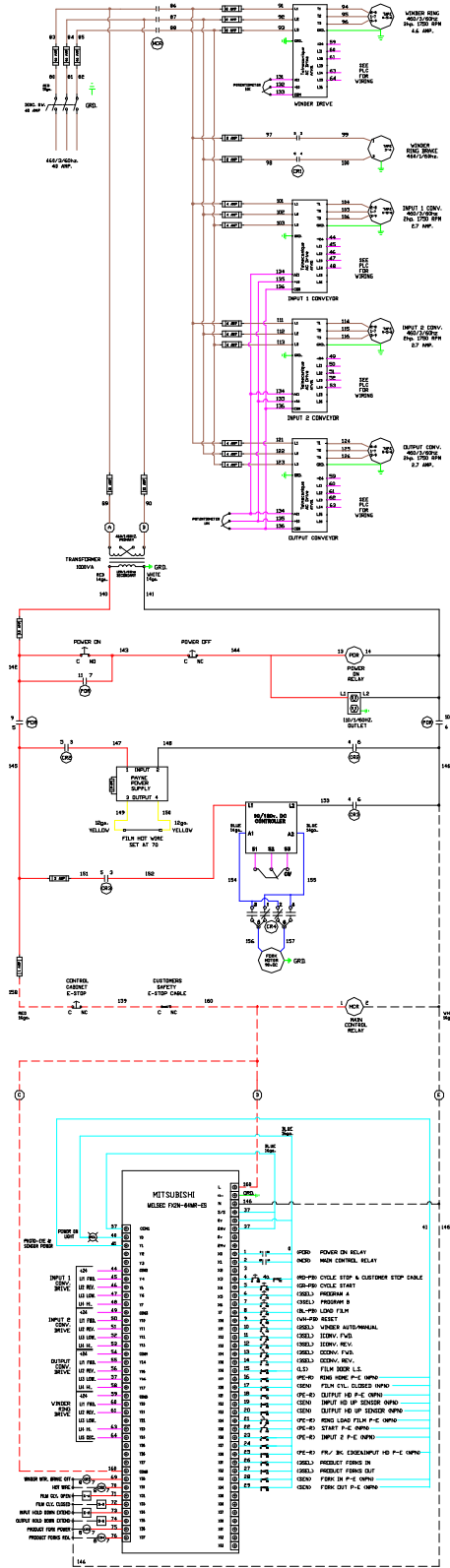
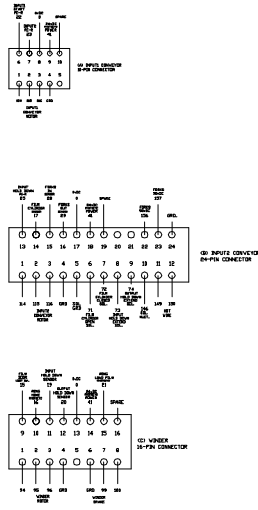
ITEM	PART # / DWG. #	DESCRIPTION	QTY
1	270190	LOCK OUT/SHUT OFF UNIT	1
2	270191	JOINER KIT	1
3	270192	FILTER REGULATOR UNIT	1
4	270195	MAC 82 SERIES ASSEMBLY (sol., reg., and gages)	1



- 110V L1 ——— 14ga. RED
- 110V L2 ——— 14ga. WHITE
- 110V L1 CONTROLS - - - 14ga. RED
- 110V L2 CONTROLS - - - 14ga. WHITE
- 460V ——— 12ga. BLACK
- 90vDC ——— 14ga. BLUE
- DC CONTROLS ——— 16ga. BLUE
- DRIVES ——— 18ga. DRANGE
- HOT WIRE ——— 18ga. YELLOW
- GROUND ——— 18ga. GREEN

- (LG-PS) LIGHTED GREEN PUSH BUTTON
- (RD-PS) RED PUSH BUTTON
- (RM-PS) RED MUSHROOM PUSH BUTTON
- (GR-PS) GREEN PUSH BUTTON
- (WH-PS) WHITE PUSH BUTTON
- (BL-PS) BLUE PUSH BUTTON
- (BK-PS) BLACK PUSH BUTTON
- (CSL) 2-POSITION SELECTOR
- (CSL) 3-POSITION SELECTOR
- (LS) LIMIT SWITCH
- (CSD) CYLINDER SENSORS
- (PE-CD) PHOTO-EYE REFLECTIVE

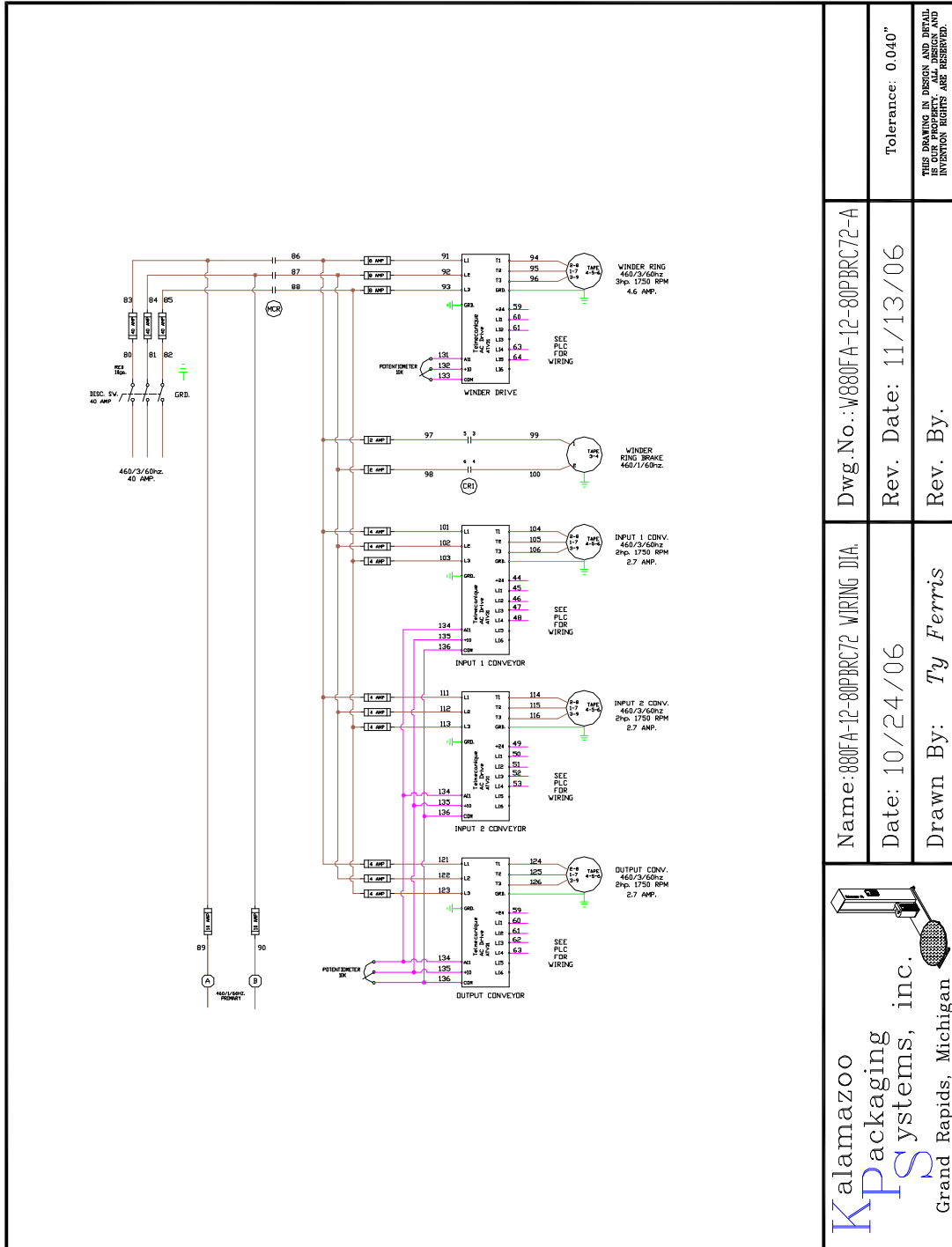
- PHOTO-EYE WIRING
- 41 BROWN
- 0 BLUE
- SIGNAL WHITE



Name: 800FA-12-80PBC72 FULLY-AUTOMATIC CONVERTER WINDER (NPP)
 Date: 10/24/06
 Drawn By: Ty Ferris

Dwg.No.: W880FA-12-80PBC72
 Rev. Date: 11/16/06
 Rev. By: Jamey Moore

Tolerance: 0.040"
 THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY. ALL DESIGN AND INVENTION RIGHTS ARE RESERVED.

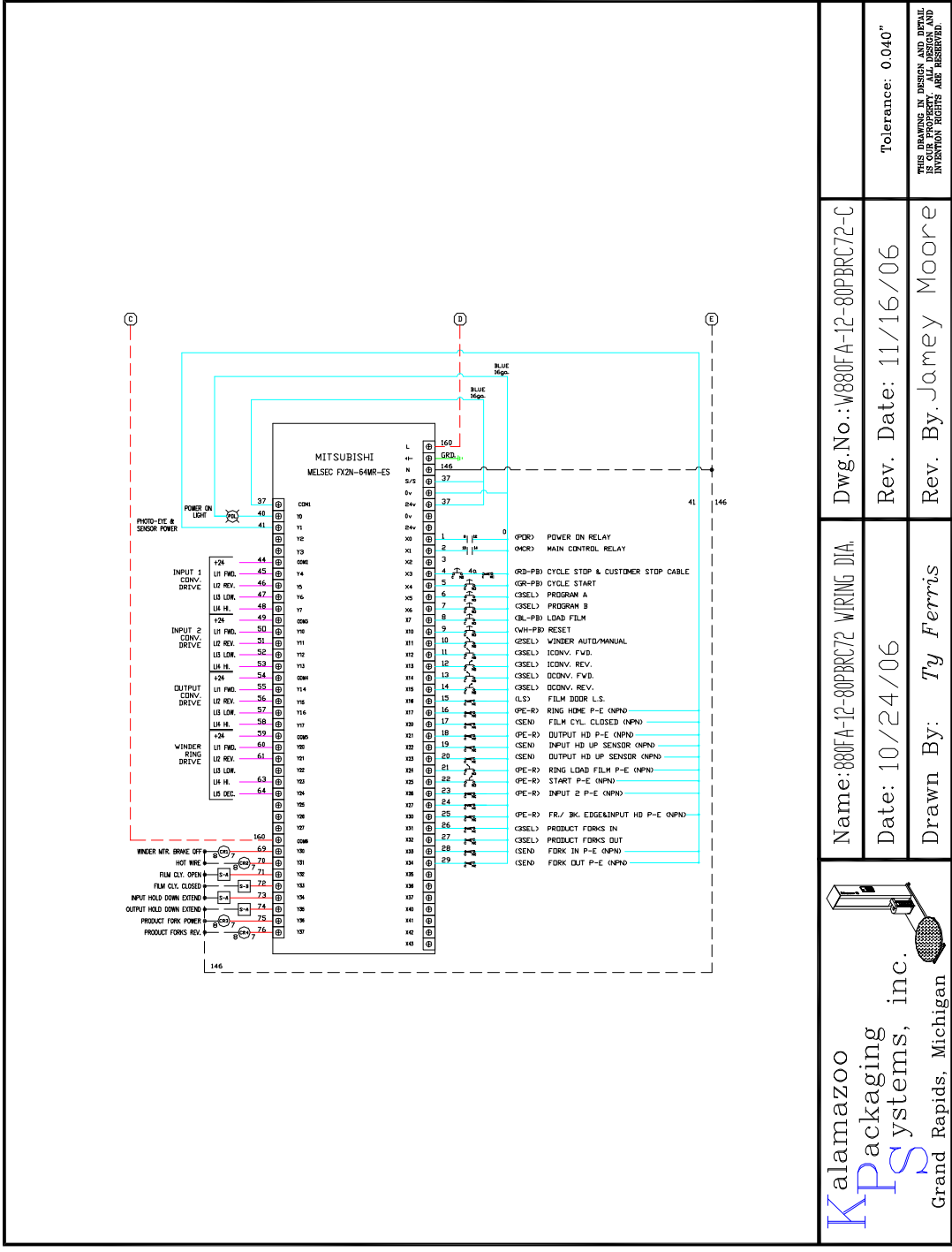


Kalamazoo Packaging Systems, Inc.
 Grand Rapids, Michigan

Name: 880FA-12-80PBR72 WIRING DIA.
 Date: 10/24/06
 Drawn By: Ty Ferris

Dwg.No.: W880FA-12-80PBR72-A
 Rev. Date: 11/13/06
 Rev. By:

Tolerance: 0.040"
 THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY. ALL DESIGN AND INVENTION RIGHTS ARE RESERVED.

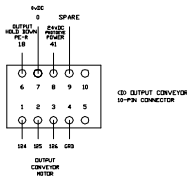
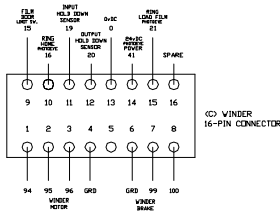
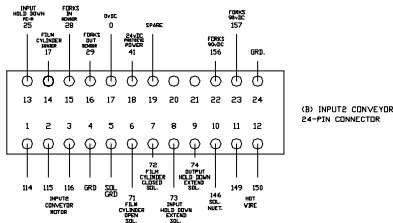
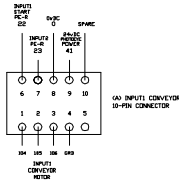


Dwg.No.: W880FA-12-80PBC72-C
 Tolerance: 0.040"

Name: 880FA-12-80PBC72 WIRING DIA
 Date: 10/24/06
 Drawn By: Ty Ferris

Rev. Date: 11/16/06
 Rev. By: Jamey Moore

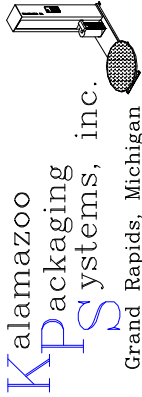
Kalamazoo
KPS Packaging Systems, inc.
 Grand Rapids, Michigan



- 110v L1 ——— 14ga. RED
- 110v L2 ——— 14ga. WHITE
- 110v L1 CONTROLS - - - - - 16ga. RED
- 110v L2 CONTROLS - - - - - 16ga. WHITE
- 460v ——— 14ga. BLACK
- 90vDC ——— 16ga. BLUE
- DC CONTROLS ——— 16ga. BLUE
- DRIVES ——— 18ga. ORANGE
- HOT WIRE ——— 10ga. YELLOW
- GROUND ——— 10ga. GREEN

- (LG-PB) LIGHTED GREEN PUSH BUTTON
- (RD-PB) RED PUSH BUTTON
- (RM-PB) RED MUSHROOM PUSH BUTTON
- (GR-PB) GREEN PUSH BUTTON
- (WH-PB) WHITE PUSH BUTTON
- (BL-PB) BLUE PUSH BUTTON
- (BK-PB) BLACK PUSH BUTTON
- (2SEL) 2-POSITION SECELTOR
- (3SEL) 3-POSITION SECELTOR
- (LS) LIMIT SWITCH
- (SEN) CYLINDER SENSORS
- (PE-R) PHOTO-EYE RETROREFLECTIVE

- PHOTO-EYE WIRING
- 41 BROWN
- 0 BLUE
- SIGNAL WHITE

Name: W880FA-12-80PBRCT2-D		Dwg.No.: W880FA-12-80PBRCT2-D	
Date: 10/24/06		Rev. Date: 11/16/2006	
Drawn By: Ty Ferris		Rev. By: Jamey Moore	
		THIS DRAWING IS DESIGN AND INVENTION RIGHTS ARE RESERVED.	

Mitsubishi PLC program #860FA-20-60PBRC120